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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Alexander H. Borchers and Kenneth W. Dobie

For: Antisense Modulation of Hematopoietic cell protein tyrosine kinase Expression

BOX SEQUENCE

Assistant Commissioner for Patents

Washington DC 20231

PATENT APPLICATION TRANSMITTAL LETTER

Transmitted herewith for filing, please find the following:

- · The specification of the above-referenced patent application;
- · An executed Declaration or Oath and Power of Attorney;
- · An Assignment of the invention to Isis Pharmaceuticals Inc. with recordation cover sheet (PTO Form PTO-1595) and \$40.00 cover fee;
- · Statement to Support Filing and Submission of DNA/Amino Acid Sequences in Accordance with 37 CFR § § 1.821 through 1.825;
- · Sequence listing in computer readable form in accordance with 37 C.F.R. § 1.821(e);
- · An Information Disclosure Statement with references; and
- · Applicant claims small entity status pursuant to 37 CFR § 1.27.

The filing fee has been calculated as shown below:

For:	No. Filed	No. Extra	Rate	Fee
	BASE FEE			\$370.00
Total Claims	20 - 20 =	0	x \$9=	\$0
Indep. Claims	2 - 3 =	0	x\$40=	\$0

The Commissioner is hereby authorized to charge the following fees to Deposit Account No. 500252:

- the amount of \$410.00 for the above listed fees;
- · payment of the following fees associated with this communication or credit any
- · any additional filing fees required under 37 CFR 1.16 including fees for presentation of extra claims; and
- · any additional patent application processing fees under 37 CFR 1.17 and under 37 CFR 1.20 (d).

Triplicate copies of this transmittal are enclosed

Date: December 4.

Donna T. Ward Registration No. 48,271 Isis Pharmaceuticals, Inc.

Please address all correspondence to: Jane Massey Licata or Kathleen A. Tyrrell Licata & Tvrrell. P.C. 66 East Main Street Marlton NJ 08053

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Inventor(s): Alexander H. Borchers and Kenneth W. Dobie

Serial No.: not yet assigned Filing Date: herewith

Title: Antisense Modulation of Hematopoietic cell protein tyrosine kinase Expression

BOX SEQUENCE Assistant Commissioner for Patents Washington, D.C., 20231

STATEMENT TO SUPPORT FILING AND SUBMISSION IN ACCORDANCE WITH 37 C.F.R. §§ 1.821 THROUGH 1.825

I hereby state, in accordance with the requirements of 37 C.F.R. §1.821(f), that the contents of the paper and computer readable copies of the Sequence Listing, submitted in accordance with 37 C.F.R. §1.821(c) and (e), respectively, are the same.

Date: December 4, 2001

Respectfully submitted,

Registration No. 48,271 Isis Pharmaceuticals, Inc.

Please address all correspondence to:

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